

REMARKS

Minor amendments have been made to the specification to add several reference numbers pertaining to the drawings, and to correct typographical errors. Claims 16 - 27 have been amended. No new matter has been introduced with these corrections or amendments, which are supported in the specification as originally filed. Claims 16 - 27 remain in the application.

In the claim language, the term "the first proxy" is used to refer to function described in Applicants' specification as being carried out by Y' 510 (see Fig. 5B and its corresponding text); "the second proxy" refers to function described as being carried out by Y" 511; "the third proxy" refers to function described as being carried out by Z" 513; and "the fourth proxy" refers to function described as being carried out by Z' 512. The amendments made herein are designed to more clearly align the claim language with the teachings on p. 17, lines 1 - 21 and p. 18, line 18 - p. 20, line 12 (and Fig. 5B).

I. Amendments and Objections to the Drawings

The Draftsperson has objected to the drawings as having improper margins and pale lines in several cases. Formal drawings are being submitted, under separate cover, that overcome these objections. In addition, proposed drawing corrections are submitted herewith for Figures 4B and 5B, as discussed above in "Amendments to the Drawings". As stated therein, the correction to Figure 4B adds an ampersand symbol for element 410, such that it now reads "&datastream". This is supported in the specification on page 14, line 21 - page 15, line 1, which states that the result 410 is passed "in the form of a reference to a datastream object"; the

ampersand symbol is well known to indicate an object reference. (See also page 9, lines 20 - 21, discussing a similar data stream object reference 417, which is shown in Figure 4A as including an ampersand.) The correction to Figure 5B removes a typographical error in element 506. No new matter is introduced with these proposed corrections, which are supported in the specification as originally filed.

II. Double-Patenting Rejection

Paragraph 4 of the Office Action dated December 5, 2003 (hereinafter, "the Office Action") states that Claims 16, 20, and 24 (which are independent claims) are rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 - 15 of U. S. Patent 6,157,960 to Kaminsky et al. in view of Claims 1 - 9 of U. S. Patent 6,324,543 to Cohen et al. and a printed publication titled "Fine Grained Mobility in the Emerald System" by Jul et al. This rejection is respectfully traversed with reference to the claims as amended herein.

Applicants have amended their independent Claims 16, 20, and 24 herein to explicitly state that the program to be distributed is not specially adapted for distributed execution: that is, the program was not written using a special language that is designed for distributed execution. (This limitation is stated in the specification on page 13, lines 12 - 15.) The "Emerald" programming language taught by Jul, in contrast, is specifically designed for distributed execution. See, for example, the first sentence of the abstract, which states "Emerald is an object-based language and system designed for the construction of distributed programs."

(emphasis added) Many other references of this type are found in the Jul reference. For example,

- Section 1, "Introduction", teaches that "... Emerald has language support for mobility [i.e., for distributing code]. Not only does the Emerald language explicitly recognize the notions of location and mobility, but the design of conventional parts of the language ... is affected by mobility.". See page 1, last paragraph.
- Section 1 also states that the Emerald language has explicit "mobility and location primitives". See page 2, last paragraph.
- Section 2, "Overview of Emerald", begins by stating that "... an important goal of Emerald was explicit support for mobility." (emphasis added). See page 3, first paragraph.
- Section 2.3, "Primitives for Mobility", provides a list of primitives that are to be used by the programmer to make objects mobile (i.e., capable of being distributed). See page 6.

Clearly, a language that includes special primitives for specifying location and mobility and which was designed for constructing distributed programs (as taught by Jul) is distinct from Applicants' claimed invention where the programmer does not specially adapt his program for distributed execution. In Applicants' claimed invention, the actions taken to make code distributable are performed programmatically. Applicants therefore respectfully submit that Jul is an improper reference for analyzing patentability of their claimed invention.

Neither Kaminsky nor Cohen, nor a combination thereof, teaches use of four proxies for distributing code that includes passing of complex objects as parameters. Thus, Applicants respectfully submit that the cited references do not render their claimed invention unpatentable or obvious, and the Examiner is respectfully requested to withdraw the double patenting rejection.

III. Rejection Under 35 U.S.C. §112, second paragraph

Paragraph 6 of the Office Action states that Claims 16 - 17, 20 - 21, and 24 - 25 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. In particular, a number of terms in these claims are discussed as being problematic. Appropriate correction has been made with the amendments herein, and the Examiner is respectfully requested to withdraw this §112 rejection.

IV. Rejection Under 35 U.S.C. §103(a)

Paragraph 8 of the Office Action states that Claims 16, 20, and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent 5,881,230 to Christensen et al. in view of U. S. Patent 5,457,797 to Butterworth and the above-mentioned printed publication of Jul. This rejection is respectfully traversed.

As demonstrated above with reference to the double-patenting rejection, Jul is an improper reference for Applicants' claims, which use programmatically-generated logic to distribute programs, in contrast to Jul's teachings of a language that programmers can use to

specially construct distributable programs.

Christensen fails to teach use of the four proxies discussed in Applicants' independent claims. Furthermore, Applicants find no reference in Christensen to passing parameters, and note that Christensen's examples contain no parameters (that is, the examples use the syntax "FOO()"). In contrast, Applicants' independent claims all refer to passing parameters between objects, and provide limitations describing how programmatically-generated proxies enable the parameters to be passed transparently when the objects are located on more than one computer.

Text in the Butterworth patent teaches away from Applicants' claimed invention. See Butterworth's Abstract, lines 1 - 3, which explicitly states that an application program is "defin[ed] ... for execution on at least two ... computers". See also the preamble of Butterworth's independent Claim 1, which specifies "A method of using a computer to design an application program to be executed on at least two interconnected computers" (emphasis added). This is in contradiction to Applicants' claimed invention, which now explicitly states in the preamble of each independent claim that the program to be distributed is not specially adapted for distributed execution: that is, the program was not designed or written for execution on at least two computers.

Accordingly, Christensen, Butterworth, and Jul cannot be combined to yield the claims of Applicants' invention, and Applicants therefore respectfully request withdrawal of the §103 rejection.

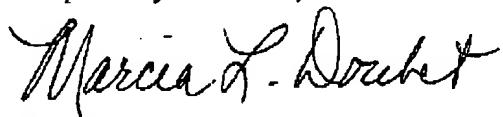
V. Objection to Claims

Paragraph 9 of the Office Action states that Claims 16 - 17, 20 - 21, and 24 - 25 would be allowable if rewritten to overcome the rejections under U. S. C. §112, second paragraph, and to include the limitations of the respective base claims and all intervening claims. Applicants believe that the claim numbers given in the paragraph are a typographical error, and that the claim numbers were meant to be Claims 17 - 19, 21 - 23, and 25 - 27 (as stated in Box 7 of the Office Action Summary). In any case, Applicants believe that all claims of their invention, as amended herein, are presently allowable, and the Examiner is respectfully requested to withdraw this objection.

VI. Conclusion

Applicants respectfully request reconsideration of the pending rejected claims, withdrawal of all presently outstanding objections and rejections, and allowance of all remaining claims at an early date.

Respectfully submitted,



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Attachment: Replacement Sheets (2)

Serial No. 09/692,990

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Docket CR9-97-092-US2

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